1012-43-64   **Lawrence W. Baggett*** (`baggett@euclid.colorado.edu`). *Noncommutative multiresolution analyses.* Preliminary report.

We initiate the study of multiresolution analyses where the group of translations is noncommutative. We try to mimic the constructions from the classical case to determine the nature, in this context, of scaling functions, low-pass and high-pass filters, and multiplicity and dimension functions. Techniques from representation theory, i.e., direct integral decompositions, are the tools we employ. (Received September 02, 2005)